

IN THE CLAIMS:

Kindly amend claim 1 as follows:

Claim 1 (twice amended). An injection system for delivering a gaseous substance from a container to a patient through a conduit mountable to the patient's pulmonary respiratory system; said injection system comprising:

a control unit controlling said injection system;

B1 a valve assembly in connection with the conduit to selectively allow delivery of the gaseous substance from the container to the conduit; said valve assembly including a valve and valve actuating means allowing variable opening of said valve; said valve actuating means being coupled to said control unit to be controlled thereby; and

a flowmeter quantitatively measuring inspiratory gas flow in the conduit; said flowmeter being coupled to said control unit to supply inspiratory gas flow data thereto;

wherein a) said control unit is so configured as to receive and analyze said inspiratory gas flow data and as to control said valve assembly so that said variable opening of said valve is responsive to said inspiratory gas flow in the conduit so as to achieve a predetermined concentration of the gaseous substance with respect to the inspiratory gas, and b) said control unit is so configured as to vary said predetermined concentration within a plurality of inspiratory phases of the patient on the basis of said inspiratory gas flow data.

Kindly amend claim 9 as follows:

B2 Claim 9 (twice amended). An injection system for delivering a gaseous substance from a container to a patient through a conduit mountable to the patient's pulmonary respiratory system along with a ventilator also mountable to the patient's pulmonary respiratory system for forcing inspiratory gas therein; said injection system comprising: